



IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Kurt E. Spears et al

Confirmation No.: 3181

Application No.: 09/919008

Examiner: Luu, Thanh X

Filing Date: Jul 31, 2001

Group Art Unit: 2878

Title: Optical Image Scanner With Variable Focus (as Amended)

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Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith in **triplicate** is the Appeal Brief in this application with respect to the Notice of Appeal filed on 03/08/2004.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$330.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:

( ) one month	\$110.00
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( ) four months	\$1480.00

( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of \$330.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Typed Name: Donna M Kraft

Signature: *Donna M Kraft*

Respectfully submitted,

Kurt E. Spears et al

By *A. L. Winfield*

Augustus W Winfield

Attorney/Agent for Applicant(s)

Reg. No. 34,046

Date: 03/09/2004

Telephone No.: 970 898 3142

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Mail Stop 35  
Fort Collins, Colorado 80527-2400

PATENT APPLICATION

ATTORNEY DOCKET NO. 10013070-1



IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Kurt E. Spears & Steven L. Webb

Serial No.: 09/919,008

Examiner: Luu, Thanh X.

Filing Date: 07/31/01

Group Art Unit: 2878

Title: OPTICAL IMAGE SCANNER WITH VARIABLE FOCUS (as amended)

THE ASSISTANT COMMISSIONER OF PATENTS  
Washington, D.C. 20231

BRIEF ON APPEAL

INTRODUCTION

Pursuant to the provisions of 37 CFR § 1.191 *et seq.*, applicants hereby appeal to the Board of Patent Appeals and Interferences (the "Board") from the examiner's final rejection dated 11/10/2003. A notice of appeal was timely filed on 03/08/2004, in accordance with 37 CFR § 1.8. This brief on appeal is being filed in triplicate (37 CFR § 1.192(a)) and is accompanied by the requisite fee (37 CFR 1.192(a) and 1.17(c)).

REAL PARTY IN INTEREST

The entire interest in the present application has been assigned to Hewlett-Packard Development Company, L.P. as recorded at reel 014061, frame 0492.

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## **RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences.

## **STATUS OF CLAIMS**

Claims 1, 3, 4, 9, 11, 12, 17, and 18 are pending in the application.

Claim 12 is allowed.

Claims 1, 9, 17 and 18 are rejected.

Claims 3, 4, and 11 are objected to.

Claims 1, 9, 17, and 18 are on appeal.

## **STATUS OF AMENDMENTS**

No after-final amendments have been submitted. All earlier amendments have been entered.

## **SUMMARY OF INVENTION**

A scanner (figure 1) has an optical head (100) that includes lenses (106) and a photosensor array (108). The distance of the optical head or photosensor, relative to a surface of a platen (for example, surface 110), is variable (direction 122 in figure 1). As a result, the primary focal point for the lenses can be moved relative to a surface of the platen.

In the example embodiment illustrated in figures 2A-2C, the distance of the photosensor array (108), relative to a surface of the platen (for example, surface 100), depends on the direction of travel of the optical head (the optical head tilts when moving as in figure 2B). See the discussion of figures 2A-2C at page 5, line 25, through page 6, line 25. In the example embodiments of figures 3A-3C, and 4A-4C, the displacement of the optical head 100 (and the photosensor array 108 within the optical head) relative to a surface of the platen (for example, surface 100), depends on the direction of travel (pivoting pads pivot to different rotational positions depending on direction of travel). For

example, in figure 3A, the optical head is closer to surface 110 when motion is to the right (arrow 124) than when motion is to the left (arrow 126). See the discussion of figures 3A-3B on page 7, lines 3-16.

Claim 9 specifies translating an optical head in a direction substantially parallel to a platen (for example, figures 3A-3C), adjusting a distance of the optical head relative to the platen, where the distance is dependent on a direction of translation of the optical head (for example, figure 3B vs. figure 3C).

Claim 18 specifies a platen, a photosensor array, the photosensor array being translated substantially parallel to the platen (for example, figures 3A-3C), where a first direction of translation causes the photosensor array to be displaced from the platen a first distance, and where a second direction of translation causes the photosensor array to be displaced from the platen a different distance (friction during translation causes the pivoting pads to rotate to a stop position, for example, figure 3B vs. figure 3C).

## **ISSUES**

1. Whether claims 1, 9, 17 and 18 are unpatentable under 35 U.S.C. § 102 as anticipated by U.S. Patent Number 5,362,958 (Ando).

## **GROUPING OF CLAIMS**

For purposes of this appeal, each of claims 9 and 18 stands on its own, as discussed in the following Argument section.

For purposes of this appeal, claims 1 and 17 stand or fall together with claim 9.

## ARGUMENT

### Outline

- I. Summary of the brief on appeal.
- II. Summary of the requirements for anticipation under 35 U.S.C. § 102.
- III. Discussion of claim 9.
- IV. Discussion of claim 18.

#### **I. Summary of the brief on appeal.**

A. Ando does not teach or suggest adjusting a distance of an optical head relative to a platen, where the distance is dependent on a direction of translation of the optical head, as specified in claim 9.

B. Ando does not teach or suggest a photosensor array being translated substantially parallel to a platen, where a first direction of translation causes the photosensor array to be displaced from the platen a first distance, and where a second direction of translation causes the photosensor array to be displaced from the platen a different distance, as specified in claim 18.

#### **II. Summary of the requirements for anticipation under 35 U.S.C. § 102.**

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

“The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

### **III. Discussion of claim 9.**

Claim 9 specifies translating an optical head in a direction substantially parallel to a platen, and; adjusting a distance of the optical head relative to the platen, where the distance is dependent on a direction of translation of the optical head.

Ando does not teach or suggest translating an optical head in a direction substantially parallel to a platen, and; adjusting a distance of the optical head relative to the platen, where the distance is dependent on a direction of translation of the optical head.

In Ando, a spot light is projected on the original image and the reflected light from the original is used for obtaining the surface profile data (for example, column 13, lines 7-15). In Ando, figure 5(b), the profile of the distance to the original image is calculated. In figure 6(b), an image scanning head can be moved vertically to adjust focus based on the calculated profile. In Ando, figure 3 (S206), and column 6, lines 24-43, the head is moved one scanline, the head is adjusted to a focal position, one line of the image is read, and the process is repeated.

In paper 112003, page 3, regarding claim 9, the examiner cites figure 6 as illustrating an optical head that travels substantially parallel to the platen. From Ando, column 6, lines 34-43, for an original image that is not perfectly flat, the head does not travel substantially parallel to the platen (see also figure 7). The distance from the platen to the head is adjusted for each scanline.

In paper 112003, page 3, regarding claim 9, the examiner cites figures 5 and 7 as illustrating an optical head displaced from the platen by a first distance for a first direction of travel and by a second distance for a second direction of travel.

First, if the original image has a profile as illustrated in figure 5(a), then the optical head does not travel substantially parallel to the platen, as required by the first element of claim 9.

Second, the cited figures do not support the examiner's assertion regarding the second element of claim 9. Figure 5(a) illustrates the profile of the original image, and figure 5(b) illustrates a calculated profile of the original image. Neither figure 5(a) or figure 5(b) illustrate a distance from the platen to the optical head, and neither figure 5(a) or figure 5(b) illustrate a distance from the platen to the optical head that changes with

direction of travel. Figure 7 illustrates that the distance from the platen to the optical head can be changed, but does not teach or suggest that the distance is different for a different direction of travel.

Ando is silent regarding what happens when the optical head is moving in a direction opposite to the scanning direction. There is no express or inherent description of the distance being different for a different direction of travel. For a perfectly flat image, the optical head would travel substantially parallel to the platen, but Ando does not teach or suggest that the distance between the optical head and the platen would change with direction of travel.

#### **IV. Discussion of claim 18.**

Claim 18 specifies a photosensor array being translated substantially parallel to a platen, where a first direction of translation causes the photosensor array to be displaced from the platen a first distance, and where a second direction of translation causes the photosensor array to be displaced from the platen a different distance.

Ando does not teach or suggest a photosensor array being translated substantially parallel to a platen, where a first direction of translation causes the photosensor array to be displaced from the platen a first distance, and where a second direction of translation causes the photosensor array to be displaced from the platen a different distance.

In paper 112003, page 2, regarding the first element of claim 18, the examiner's arguments for the first element of claim 18 are the same as for the first element of claim 9, and applicant's arguments above for the first element of claim 9 are equally applicable to the first element of claim 18.

In paper 112003, page 3, regarding the second element of claim 18, the examiner states: "That is, in Figures 5 and 6 when the optical head moves in a first direction (right) towards a curve of the book, a distance of the optical head is adjusted (moved vertically; see figure 7) by a first distance for focus adjustment; and when the optical head moves in a second direction (left) the optical head is adjusted by a second distance for flat scanning." The first part of the statement contradicts the requirement of the first element of claim 18.

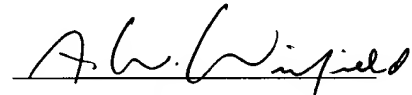
The second part of the statement is not supported in Ando. Again, Ando is silent as to what might or might not happen when the optical head is moving in a second direction (left).

In addition, claim 18 specifies that the direction of translation *causes* the displacement to be different. For example, for the embodiment illustrated in figures 3B and 3C, direction of movement creates a direction of friction force resulting in a different displacement of the optical head relative to the platen. Ando does not teach or suggest that direction of translation *causes* anything.

### CONCLUSION

In view of the above, applicant respectfully requests that the examiner's rejection of claims 1, 9, 17, and 18 be reversed.

Respectfully submitted,



Augustus W. Winfield

Reg. No. 34,046

March 9, 2004

Fort Collins, CO 80528-9599

(970) 898-3142



## APPENDIX

### CLAIMS ON APPEAL

1. A scanner comprising:
  - a platen; and
  - an optical head that travels substantially parallel to the platen, the optical head displaced from the platen by a first distance for a first direction of travel of the optical head and by a different distance for a second direction of travel of the optical head.
9. A method of scanning, comprising:
  - translating an optical head in a direction substantially parallel to a platen, and;
  - adjusting a distance of the optical head relative to the platen, where the distance is dependent on a direction of translation of the optical head.
17. A scanner comprising:
  - a photosensor array;
  - a platen; and
  - means for changing a distance of the photosensor array relative to a surface of the platen, dependent on a direction of translation of the photosensor array.
18. A scanner comprising:
  - a platen;
  - a photosensor array, the photosensor array being translated substantially parallel to the platen, where a first direction of translation causes the photosensor array to be displaced from the platen a first distance, and where a second direction of translation causes the photosensor array to be displaced from the platen a different distance.